

## CHAPTER 2 • ALTERNATIVES

### A. ALTERNATIVE DEVELOPMENT

A preliminary review of Southwestern Region forest plans was conducted in 1993. The review identified the plan changes that would result from incorporating current Mexican spotted owl and northern goshawk management direction into existing forest plans. The Regional Forester also identified needed changes in the silvicultural emphasis, old growth allocation and steep slope (40%+) logging practices. The review also identified other standards and guidelines in the forest plans that may conflict with the management direction proposed to be added to the forest plans.

A proposed action was developed based on the forest plan review, known management knowledge for the Mexican spotted owl and northern goshawk, and the changes identified by the Regional Forester. A summary of the proposed forest plan changes was developed as a Scoping Report that was sent to the public for review in late 1993 (see Chapter 5 of this environmental impact statement for more information).

The National Environmental Policy Act requires that a "no action" alternative be developed for this environmental impact statement (see Alternative A). Alternative B was described in the Scoping Report as the initial proposed action. Three additional alternatives were developed in early 1994 based on comments received on the Scoping Report. Alternative C was developed by modifying Alternative B with the wording and content changes suggested by Scoping Report commenters. Alternative C was identified in the draft environmental impact statement (DEIS) as the proposed action of the Forest Service. Alternative D was developed from suggestions submitted by the Goshawk Interagency Implementation Team. Alternative E was developed from suggestions submitted by Applied Ecosystems, Inc. Alternative F was based on suggestions by the Apache-Sitgreaves National Forest for an ecosystem approach to vegetation management.

A DEIS was released for comment as documented in a Notice of Availability in the Federal Register on August 19, 1994. The Notice identified a formal comment period ending on December 01, 1994 (a total of 104 days). Comments on the DEIS that were submitted late were considered if they were received prior to May 1, 1995 (a total of 151 extra comment period days).

DEIS commenters suggested changes in several of the alternatives. All of the action alternatives depicted in the final EIS are within the range of environmental effects disclosed in the draft EIS. The changes made in the FEIS are consistent with the intent of existing regulations (40 CFR 1503.4). A summary of the changes for each alternative follows.

Alternative A was modified to reflect resource management direction in forest plans that existed prior to Forest Service adoption of special interim management guidelines for the Mexican spotted owl and northern goshawk. The public asked for this change to make the "no action" alternative a better baseline for comparison of the true resource and socio-economic impacts from adopting final Mexican spotted owl and northern goshawk guidelines.

Alternative C was separated from Alternative F because comments received stated that the presentation in the DEIS of the paired alternatives was confusing. This combined alternative was identified as the agency's preferred alternative in the DEIS.

Alternative D was adjusted to reflect comments received from the Arizona and New Mexico state game agencies. The northern goshawk standards and guidelines depicted in Appendix E for Alternative D are a verbatim rendition lifted directly from their jointly submitted DEIS comment letter and replace input previously supplied from the Goshawk Interagency Implementation Team. The Mexican spotted owl standards and guidelines were adjusted to reflect information in the Mexican Spotted Owl Recovery Plan.

Alternative E was not changed from draft to final EIS.

Alternative G was added after the draft based on many comments received that the agency needed to respond to the Mexican Spotted Owl Recovery Plan (MSORP). The MSORP was released for public review in March, 1995. A team of federal scientists, including a Recovery Plan Team member, developed Alternative G standards and guidelines for both birds in early May, 1995 (see Chapter 4 for Team information). This team translated the MSORP into forest plan standards and guidelines and also developed northern goshawk standards and guidelines considering existing forest service direction, Goshawk Interagency Implementation Team recommendations and the DEIS comment letter submitted by the state game agencies.

The primary difference between the action alternatives is the variance in the specific language for the standards and guidelines that will ultimately be included in the amendment of Southwestern Region forest plans. Appendix E of this final environmental impact statement contains the standards and guidelines applicable to each alternative.

## **B. ALTERNATIVES DROPPED FROM DETAIL STUDY**

The original proposed action (Alternative B) that was depicted in the Scoping Report has been dropped from detail study. The many commenters to the Scoping Report, both internal and external to the agency, suggested wording changes that helped clarify the intent of the amendment. The changes are minor and have been incorporated in Alternative C. The expected environmental effects of Alternative B would not be any different than those expected for Alternative C. Alternative C has been carried forward as an alternative discussed in detail.

## **C. ALTERNATIVES CONSIDERED IN DETAIL**

**1. Objectives Common to Alternatives:** The objectives stated in Chapter 1 of this environmental impact statement for the proposed action are exactly the same for all action alternatives.

**2. Alternative Mitigation:** This environmental impact statement is a programmatic document. Site-specific mitigation measures have not been described for any of the alternatives. The wording of key standards and guidelines peculiar to each alternative are displayed in Appendix E. The broad, programmatic environmental effects of the alternatives are predicted based on the standards and guidelines in each alternative. Site specific environmental effects will be analyzed and disclosed during the Southwestern Region's Integrated Resource Management process for individual projects implemented under the umbrella of the amended forest plans.

**3. Alternative Descriptions:** Six alternatives are displayed in detail in this environmental impact statement. Each of the alternatives represent different ways to incorporate programmatic management guidance into project implementation, a different emphasis on management tools used and/or a different set of specific management direction (e.g., different wording for standards and guidelines). For specific details on how the standards and guidelines would vary by alternative, review Appendix E of this final environmental impact statement.

**Alternative A:** Alternative A is the "no action alternative" required by the National Environmental Policy Act regulations (40 CFR Part 1502.14(d)). In the context of this programmatic environmental impact statement, Alternative A would continue existing forest plan direction for Mexican spotted owl and northern goshawk management. Formal consultation related to the Mexican spotted owl would be sought on any and all forest management activities deemed to "may affect" the owl. New direction for the two birds would not be added to forest plans until they are revised beginning in 1996 and ending in 2002. Old growth allocation percents would still vary from forest to forest. Even-aged management would be the emphasized silvicultural tool. The Apache-Sitgreaves, Carson, Coconino, and Kaibab National Forest plan would maintain the existing Mexican spotted owl standard for a 300 acre core area around each occupied nest, even though on-the-ground management would be guided by biological opinions issued by the Fish and Wildlife Service. The Apache-Sitgreaves, Carson, Cibola, Coconino, and Prescott National Forest Plans would maintain the existing northern goshawk standard for a 20 to 30 acre core area around occupied nests. The Kaibab would provide 8 chain buffers around occupied nests. No other northern goshawk protection would be provided. Steep slope (slopes 40%+) harvest solely for timber production purposes would still be a possible activity on the Apache-Sitgreaves, Gila, Lincoln, and Santa Fe National Forests, but not on any of the other forests.

**Alternative C:** Alternative C would incorporate Mexican spotted owl and northern goshawk management direction into forest plans through the forest plan amendment process described in the National Forest Management Act regulations (36 CFR 219). Old growth standards and guidelines would be the same for every national forest in the Southwestern Region. The specific areas for old growth allocation (20%) within each management area and old growth block size would be determined during the site-specific Integrated Resource Management analysis conducted for specific projects. In areas where existing old growth was surplus to identified ecosystem needs, the best would be allocated to old growth. All existing old growth would be retained in areas where the old growth age classes were deficit. Additional lands will be allocated and managed for future old growth where needed to meet the 20% guideline. Uneven-aged silvicultural will be emphasized over other methods. The option of using even-aged silvicultural methods would be determined in the Integrated Resource Management process during the site specific analysis for projects implementing forest plans. Mexican spotted owl guidance would follow the direction stated in Interim Directive #2 plus dispersal habitat considerations. Northern goshawk

guidance would be very similar to that which is presented in the report Management Recommendations for the Northern Goshawk in the Southwestern U.S., (RM-217). Steep slope harvest would not be allowed on any national forest.

**Alternative D:** This alternative is patterned after DEIS comments submitted jointly by the Arizona and New Mexico state game agencies. The standards and guidelines for northern goshawk management are a verbatim rendition from their comment letter. The state game agency input depicted in this alternative is a slight variation from the recommendations developed by the Goshawk Interagency Implementation Team and from information depicted in the report Management Recommendations for the Northern Goshawk in the Southwestern U.S., (RM217). Alternative D is exactly like Alternative G with respect to Mexican spotted owl management guidance and silvicultural emphasis. Steep slope logging would be allowed for reasons other than timber production. Appendix E depicts the specific standards and guidelines for managing the forested areas.

**Alternative E:** This alternative is patterned after Scoping Report comments received from Applied Ecosystems, Inc. Mexican spotted owl standards and guidelines generally follow Interim Directive #2 like Alternative C, but define smaller core and territory acreages (core areas 300 to 400 acres; territories 750 to 950 acres). The northern goshawk standards and guidelines are similar to those in Alternative C, except there is less VSS class 4-6 acreage and reduced canopy cover percents in the non-nest portion of the territory. Old growth would be allocated as 10 percent of the area with no specific block size minimum defined. Steep slope logging would be allowed for reasons other than timber production. Alternative E also includes the addition of standards and guidelines to guide ecosystem planning, to address forest health concerns and to guide implementation of other standards and guidelines.

**Alternative F:** This alternative was developed by the staff on the Apache-Sitgreaves National Forest as an example of an ecosystem approach to management for the Mexican spotted owl. This alternative is like Alternative C except that a demonstration area would be established on the Apache National Forest to test an adaptive ecosystem approach to management of the mixed-conifer type (i.e., primary Mexican spotted owl habitat). The total acres of mixed-conifer type on the Apache National Forest is 168,244. This demonstration area stratifies the mixed-conifer type into six ecological zones. Management emphasis for each zone would be in accordance with prescribed standards and guidelines to manage for specific vegetation

desired condition in the mixed-conifer rather than the Mexican spotted owl guidelines depicted in Alternative C. The ecological zones are based on primary aspect and degree of slope. Zone 1 is North Aspect greater than 40% slope, Zone 2 is North Aspect 20-39% slope, Zone 3 is North Aspect 0-19% slope, Zone 4 is South Aspect greater than 40% slope, Zone 5 is South Aspect 20-39% slope, and Zone 6 is South Aspect 0-19% slope. Overlapping these zones are areas that currently have administrative decisions that prohibit, or otherwise are set aside to not receive commercial timber harvest. These overlapping areas include: wilderness, primitive areas, research natural areas, all slopes greater than 40%, areas allocated for old growth through previous NEPA decisions, and old growth allocated through this proposal to protect Mexican Spotted owl habitat. This combined area constitutes 71,223 acres of the total mixed conifer area (168,244 acres), or 42% of the mixed conifer that would receive no commercial harvest under this proposal. Where commercial harvest is allowed, the following management emphasis will be applied: Zone 2 (north facing slopes)- would be managed for timber harvest only on slopes less than 40% and would emphasize unevenaged condition utilizing single tree selection, Zone 3 (north facing slopes) - would be managed for timber harvest but again would emphasize unevenaged conditions using single tree selection, group selection, or small group shelterwood methods. In Zones 5 and 6 (south facing slopes), the area would be managed for a balance of an unevenaged and evenaged condition.

For all other areas of the region (including nonmixed-conifer zones on the Apache National Forest), all standards and guidelines as depicted in Alternative C would be implemented in this alternative. This alternative would still rely on the Integrated Resource Management process to make the site specific project design decisions. A brief comparison of the different zones in the Apache National Forest mixed-conifer is presented in Table 1 at the end of this EIS chapter.

**Alternative G:** This alternative was developed to respond to the Mexican Spotted Owl Recovery Plan (see Chapter 4 for S&G Team information). Standards and guidelines for the northern goshawk were developed in early May, 1995, and considered all known information from the Goshawk Interagency Implementation Team recommendations, the state game agency letter that responded to the draft, and experience gained during implementation of the interim direction. Appendix E contains the specific language for standards and guidelines that are associated with this alternative.

#### D. FOREST SERVICE PREFERRED ALTERNATIVE

The Forest Service preferred alternative is Alternative G. Alternative G was developed to respond directly to the Mexican Spotted Owl Recovery Plan. It was developed in collaboration with the Fish and Wildlife Service (including a Recovery Team member).

As new information becomes available during implementation of the Mexican Spotted Owl Recovery Plan, the standards and guidelines (Alternative G) incorporated by amendment in forest plans will be adjusted accordingly.

As each national forest undertakes its respective National Forest Management Act revision, this amendment language will be reanalyzed in the context of any anticipated changes in current forest plan management direction.

Chapter 3 contains a complete discussion of the expected programmatic cumulative effects from amending forest plans to include new standards and guidelines for the Mexican spotted owl and northern goshawk. Other forest plan standards and guidelines were also adjusted when they appeared to conflict with planned management direction for the two birds.

**Table 1 - Comparison of Zones as Described in Alternative F**

Zone Delineation	Slope (%) and Aspect	Total Acres	Treatment Available Acres	Management Emphasis
Zone # 1	40%+ slopes; north aspect	23,915	None	Natural Evolution
Zone # 2	20-39% slopes; north aspect	39,510	22,853	Unevenaged - single tree selection only
Zone # 3	0-19% slopes; north aspect	35,000	29,918	Unevenaged - all methods
Zone # 4	40%+ slopes; south aspect	11,470	None	Natural Evolution
Zone # 5	20-39% slopes; south aspect	24,736	14,866	Balanced Unevenaged and Evenaged
Zone # 6	0-19% slopes; south aspect	33,613	29,384	Balanced Unevenaged and Evenaged
TOTALS		168,244	97,021	